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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/747,950

12/31/2003

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EXAMINER

MOREHEAD, JOHN H

ART UNIT

PAPER NUMBER

2622

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DELIVERY MODE

05/03/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/747,950	Applicant(s) NISHIZAWA ET AL.	
	Examiner John Morehead	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Yoshida US 6992712.

*Yoshida teaches*

3. Re claim 1, <sup>Yoshida teaches</sup>an imaging device (fig. 1), comprising: a storage unit (fig. 1 element 107 and fig. 4 element 402) which pre-stores information representing a relation between one of dark current components and an output signal of an optical black pixel arranged in a predetermined optical black area on an imaging sensor, said dark current components being superimposed on pixel signals of effective pixels, respectively, arranged in a predetermined effective pixel area on the imaging sensor (Yoshida detects dark current by closing the shutter, thereby turning **all** pixels in the CCD to optical black, therefore optical black pixels are arranged in predetermined area, also see col. 4 lines 48-62 and col. 6 lines 10-26); a dark current obtaining unit (fig. 3 element 310) which obtains dark current components superimposed on pixel signals of said respective effective pixels based on both said information stored in said storage unit and output signal of said optical black pixel (col. 5 lines 58-61); and a correcting unit

(fig. 3 element 320) which corrects said dark current components obtained by said dark current obtaining unit according to said pixel signals (col. 5 lines 61-67).

*Yoshida teaches*

Re claim 2, <sup>^</sup>the imaging device according to claim 1, wherein the information stored in said storage unit (fig. 4 element 402) is information representing a ratio of said one of dark current components to said output signal every one of lines of said effective pixel area (fig. 8A, based on flow diagram, the imaging apparatus stores the dark output data of **each pixel** into RAM of digital processing circuit, therefore, there is a ratio between one of dark current components to said output signal every one of lines of said effective pixel area).

*Yoshida teaches*

Re claim 3, <sup>^</sup>the imaging device according to claim 1, wherein the information stored in said storage unit (fig. 4 element 402) is information representing a difference between said one of dark current components and said output signal every one of lines of said effective pixel area (the dark output subtraction circuit represents the difference of **each pixel**, therefore limitation is met above in claim 3, also col. 6 lines 10-26).

*Yoshida teaches*

Re claim 4, <sup>^</sup>the imaging device according to claim 1, wherein the information stored in said storage unit (fig. 4 element 402) is information representing a position of said optical black pixel in said optical black area every one of the effective pixels in said effective pixel area, said optical black pixel outputting an output signal having a value equal to said one of dark current components (col. 6 lines 10-26).

*Yoshida teaches*

Re claim 5, <sup>^</sup>the imaging device according to claim 1, wherein said optical black area is composed of the optical black pixel for at least one line from which the output signal is read prior to the pixel signals of the top line of said effective pixel area (Yoshida detects dark current first before detecting the normal picture by closing the shutter, thereby turning the pixels in the CCD to optical black, and then takes a normal picture by opening the shutter, however claim limitation is met **because optical black area is composed of the optical black pixel for at least one line from which the output signal is read prior to the pixel signals of the top line of said effective pixel area**, meaning that the dark current is detected before the effective pixel area, Yoshida therefore meets the limitation).

### **Contact**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Morehead whose telephone number is 571-270-1183. The examiner can normally be reached on Monday - Friday (alt) 7:30-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ngoc Yen Vu can be reached on 571-272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JM

4/30/07



NGOC-YEN VU  
SUPERVISORY PATENT EXAMINER